

REMARKS/ARGUMENTS

The Examiner found that claims 2, 9-23, 26, 31-33, 36, and 43-57 would be allowed if written in independent form including the requirements of the base and any intervening claims. Applicants amended claims 2, 23, 26, 36, and 57 to include the requirements of the base claims to place these claims in condition for allowance.

Applicants added new claim 59 that includes the requirements of independent claim 25 with the requirements found in allowable claims 23 and 57 that the encoded data block can be used in partial response and extended partial response systems. Applicants submit that new claim 59 is in condition for allowance for the reasons amended claims 23 and 57 are in condition for allowance.

Allowable claims 9-22, 31-33, and 43-56 are in condition for allowance in their current form because they depend from one of independent claims 1, 25, and 35, which are patentable over the cited art and in condition for allowance for the reasons discussed below.

The Examiner objected to claim 5 as requiring clarification. Applicants amended claim 5 and similarly claim 39 to clarify the claims.

1. Amendments to Specification and Drawings

Applicants amended paragraph [0014] of the Specification to correct a grammatical error.

Applicants amended paragraph [0016] of the Specification to correct the reference of the encoder to encoder 6 as disclosed in paragraph [0014] and shown in the replacement sheet for FIG. 1.

The replacement sheet for amended FIG. 1 illustrates the numbered components as disclosed in paragraph [0014] on page 4 of the Specification, including a host 2, tape driver 4 (including encoder 6, decoder 12, controller 14, read/write mechanism 16), and tape cartridge 10 (including tape medium 8). Paragraph [0014] further discloses the connections from the host 2 to the encoder 6 and the decoder 12 to the host 2 ("The tape drive 4 includes an encoder 6 to encode data received from the host 2 that is to be written on a tape medium 8 in a tape cartridge 10 engaged with the tape drive 4. The tape drive 4 further includes a decoder 12 to decode data stored on the tape medium 8 to return to the host system 2.")

Paragraph [0014] further discloses that the read/write mechanism 16 in the tape driver 34 is in communication with the tape cartridge 10 and storage medium 8 therein as shown in the

Amendments to the Drawings

The attached sheets of drawings includes changes to FIGs. 1 and 2. These sheets, which include FIGs. 1 and 2, replace the original sheets including FIG.1 and 2. The Amendments to the drawings are discussed and noted in the Remarks section.

Attachment: Replacement Sheets

amended FIG. 1. ("A controller 14 within the tape drive 4 drives a read/write mechanism 16 to perform read and write operations with respect to encoded data on the tape medium 8 in a manner known in the art.") Paragraph [0014] further discloses that the "encoder 6 and decoder 12 may be implemented as separate hardware components external to the controller 14", which is shown in the amended FIG. 1.

Applicants submit that the replacement sheet for FIG. 1 should be entered because the components and component arrangement shown in the replacement sheet is expressly disclosed in paragraph [0014] of the Specification and no new matter is included in the replacement sheet for FIG. 1.

The replacement sheet for amended FIG. 2 illustrates the three blocks of operations disclosed in paragraph [0016] on pages 4-5 of the Specification. Each block and number shown in the replacement sheet for FIG. 2 is expressly disclosed in paragraph [0016]. For instance, paragraph [0016] expressly discloses the block 100 of "receive input block to store" shown in the replacement sheet for FIG. 2. ("Control begins at block 100 when the encoder 6 receives a block of binary user data for storage on the medium 100"). Paragraph [0016] further discloses block 102 of "encode input block" shown in the amended FIG. 2. ("Next, at block 102, the encoder 104 encodes the block of binary user data in preparation for storage on the tape medium 8."). Paragraph [0016] discloses block 104 of "store encoded data block to recording medium" shown in the replacement sheet. ("the encoded data 320 is stored on the tape medium 8 at block 104").

Applicants submit that the replacement sheet for FIG. 2 should be entered because the flowchart blocks and their arrangement shown in the replacement sheet is expressly disclosed in paragraph [0016] of the Specification and no new matter is included in the replacement sheet for FIG. 2.

2. Claims 1, 3, 4, 8, 24, 25, 27, 30, 34-35, 37, 38, 42, and 58 are Patentable over the Cited Art

The Examiner rejected claims 1, 3, 4, 8, 24, 25, 27, 30, 34-35, 37, 38, 42, and 58 as anticipated (35 U.S.C. §102(e)) by Blaum (U.S. Patent No. 6,429,986). Applicants traverse.

Independent claims 1, 25 and 35 concern storing input groups of uncoded binary data on a storage medium, and require: receiving a plurality of uncoded data blocks in a data stream; generating one corresponding encoded data block for each uncoded data block, wherein an

encoded data stream obtained from concatenating successive encoded blocks includes a predetermined bit pattern comprising a plurality of bits, wherein the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" occur within a second number of bits; and storing the encoded data stream on the storage medium

The Examiner cited col. 4, lines 55-65 and col. 5, lines 20-31 as disclosing the claim requirement that the bit pattern always occurs within a first number of bits and two occurrences of 1 and 0 occur within a second number of bits. (Office Action, pg. 3) Applicants traverse.

The cited col. 4 mentions using a code having an m/n rate block coded sequence, where m represents the number of bits in a group of uncoded binary user bits and n represents the number of bits in the corresponding group of encoded bits. The group of n encoded bits contains at least one binary pattern that enables accurate timing of readback operations. Although the cited col. 4 discusses encoding words of binary data, nowhere does the cited col. 4 anywhere disclose the claim requirement that the bit pattern always occurs within a first number of bits and two occurrences of a "1" and "0" occur within a second number of bits.

The cited col. 5 mentions that "010" patterns in two neighboring encoded groups can never be separated by more than 10 intervening bits, so that the "010" pattern occurs in the encoded bit stream with a guaranteed minimum level of frequency. The cited col. 5 discusses a bit pattern of two 0s and one 1. Nowhere does the cited col. 5 anywhere disclose the claim requirement that the bit pattern always occurs within a first number of bits and in the bit pattern, two occurrences of a "1" and "0" that occur with a second number of bits.

The Examiner found that "it is inherent that 'x' is either a '0' or '1', which allows for them to occur twice. (Office Action, pg. 3) Applicants traverse this finding in that although a bit value may be 1 or 0, nowhere does this possibility anywhere disclose the specific claimed bit pattern of two occurrences of a "1" and "0" occur within a second number of bits, where the bit pattern always occurs within a first number of bits.

Further, col. 5, lines 1-5 of Blaum discusses other possibilities for the bit pattern of "010", including "00100" and "11011". However, both these other suggested patterns do not have two occurrences of a "1" and "0".

Thus, Applicants submit that nowhere does the cited Blaum disclose the specific claim requirement of a bit pattern that always occurs within a first number of bits and has two occurrences of a "1" and "0" that occur within a second number of bits. Instead, the cited bit

pattern of Blaum discusses multiple 0s and one 1, or one 0 and multiple 1s, not two occurrences of 1 and 0 as claimed.

Accordingly, claims 1, 25, and 35 are patentable over the cited art because the cited Blaum does not disclose all the claim requirements.

3. Claims 3, 4, 8, 24, 27, 30, 34, 37, 38, 42, and 58 are Patentable Over the Cited Art

Claims 3, 4, 8, 24, 27, 30, 34, 37, 38, 42, and 58 are patentable over the cited art because they depend from one of claims 1, 25, and 35, which are patentable over the cited art for the reasons discussed above.

The Examiner rejected claims 5-7, 28-29, and 39-41 as obvious (35 U.S.C. §103) over Blaum in view of Lynch (U.S. Patent No. 5,173,694).

Applicants traverse the obviousness rejection and submit that claims 5-7, 28-29, and 39-41 are patentable over the cited combination because they depend from one of claims 1, 25, and 35, which are patentable over the cited art for the reasons discussed above.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-59 are patentable over the art of record. Applicants submit herewith the fees for the claim amendments and a one-month extension of time. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0449.

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

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By: 

David W. Victor
Registration No. 39,867

Please direct all correspondences to:

David Victor
Konrad Raynes & Victor, LLP
315 South Beverly Drive, Ste. 210
Beverly Hills, CA 90212
Tel: 310-553-7977
Fax: 310-556-7984